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What cost factors should
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How can you maintain optimum
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AUERBACH INFORMATION MANAGEMENT SERIES



PRESENTING AUERBACH COMPUTER PROGRAMMING MANAGEMENT

A totally new dimension in programming management guidance

A Complete One-Volume Service. All the coverage you need — in one place — to expertly handle any programming management problem — plus case histories, time-saving charts, checklists and illustrations.

Unique Portfolio Approach. Self-contained analyses of specific programming problems go straight to the nub of each management question — delivers your answer in a fraction of the usual time.

Practical "How To" Coverage. Focuses on the day-to-day problems of running an efficient programming operation — tells you what to do, when to do it, and exactly how to do it.

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Now in one source, a full-scope programming management service—containing a wealth of time-saving features—brought to you in the clearest, most useable form ever.

Through a unique “information retrieval” system called Portfolios, some of the world’s most respected data processing authorities organize, summarize and evaluate for you every facet of the programming management function — from shortening schedules to testing techniques for modular programs.

Each Portfolio is an in-depth intelligence report of a specific programming problem—so tightly written and organized that virtually any answer you seek immediately jumps into needle-sharp focus. And because every Portfolio is a complete and definitive analysis on its subject, each can easily be withdrawn from the volume and used separately without disturbing the rest of the service.

No matter what kind of programming management problem you will ever face—in the programming department itself, from other departments, or outside sources — **AUERBACH Computer Programming Management** will show you how to minimize the impact and maximize efficiency in the everyday programming operation.

With practical innovations that save you time and sharpen your skills, here is a service that stands apart from any other you’ve ever seen.

Here’s how AUERBACH Computer Programming Management keeps you on top of today’s— and tomorrow’s—fast- shifting DP scene.

As a subscriber to this important new service, you start off with a full binder of specialized Portfolios on many different programming management problems. Then every two months you receive an infusion of new Portfolios that not only add to the overall scope of your coverage, but also update obsolete or superseded material.

All Portfolios are filed into the major tabbed sections of the volume, which organizes the entire programming management function into five broad topical areas. Within these five areas, Portfolios are grouped together into problem-related categories to help you find your answer in a hurry.

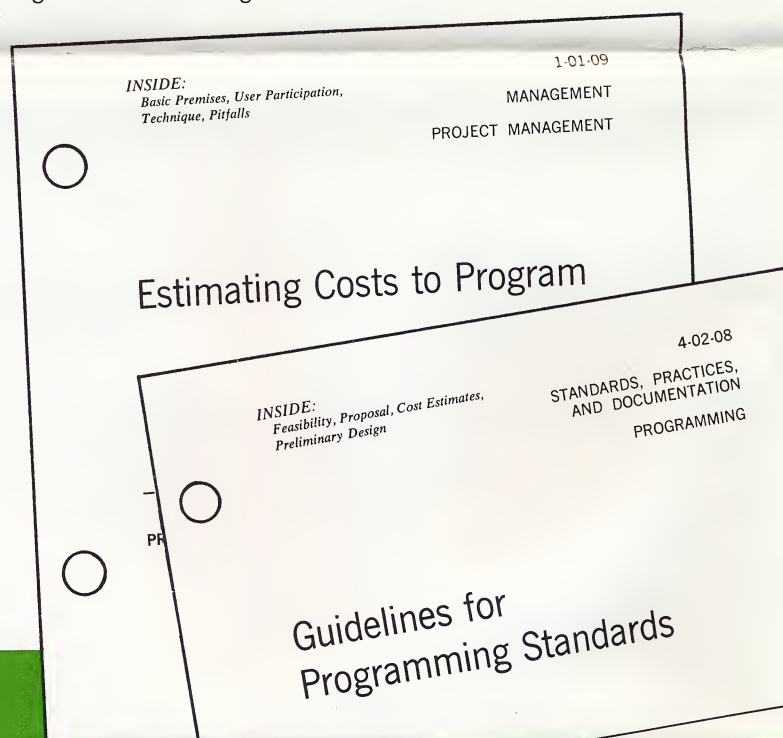
Here is a brief description of the five major sections in the service and the kinds of subjects Portfolios cover within each section. Listed under each description is a specific example of an actual Portfolio that appears in that particular section, stating the problem which the Portfolio covers and then explaining how it goes about solving it.

1 MANAGEMENT

Specific managerial techniques that apply to the supervision and direction of programming groups. Portfolios cover such areas as schedules, costs, programming quality, control of programming tasks, personnel administration, proprietary software.

PORTFOLIO: **Estimating Costs to Program**

Although many techniques have been tried, there remains a critical need to find more reliable ways to estimate the costs of designing and implementing a computer program. Even worse, after starting the program, there are similar difficulties in estimating the progress to completion. This Portfolio recommends that estimates should be made continually during development—in successively greater detail. And it reveals a specific procedure to follow that, whenever changes need to be made, they can be implemented with increasing accuracy, and the slippages that may of necessity still occur will no longer be surprises.



R IN A DATA PROCESSING SERVICE- S TO EVERY ANSWER YOU NEED TO ORGANIZE, ID MANAGE A MODERN PROGRAMMING DEPARTMENT

2 STANDARDS, PRACTICES, AND DOCUMENTATION

Standards for the programming operation as well as aids to the documentation of systems, organization and presentation of proposals, and maintenance of documentation. Portfolios cover such useful topics as flowcharting standards, automatic documentation aids and programming language standards.

PORTFOLIO: Guidelines for Programming Standards

Programming standards should not be so restrictive that they tell a programmer how to write a program. However, they do provide guidelines for attaining uniformity of quality. In addition, standards provide a yardstick to measure whether the shop is delivering reliable, easily maintainable products to the user, to avoid budget overruns caused by excessive programmer independence, and to control other factors such as extreme debug time.

This portfolio provides guidance in establishing standards and gives specific examples of how to effectively implement them.

3 ENVIRONMENT

The hardware, software, and staff facilities necessary to foster and support effective programming development. Portfolios cover such areas as coding, languages, operating systems, software maintenance, programming and debugging aids.

PORTFOLIO: Desk-Checking Techniques that Save Debugging Time

The pressure to complete the program often gets the programmer to the computer for debugging long before he's ready, and he ends up with muddled thinking and lost time. This Portfolio shows how to eliminate this problem by disclosing certain manual desk-checking techniques that are not widely known. Some of them can be standard practice in preparation for computer debugging, and should be encouraged by the manager.

4 METHODOLOGY

Programming technology and techniques that are not widely publicized in books and periodicals, but are either beginning to become accepted or emerging with great promise for acceptance. Portfolios cover such areas as structured programming, testing, on-line systems, design for reliability, computer networks, data communications, virtual storage.

PORTFOLIO: Programming Techniques to Improve Reliability of the Total Information System

Although system hardware operates virtually error-free today, when an error does occur, the results can be disastrous if system and applications programs were not designed to minimize the vulnerability to error.

This Portfolio analyzes the nature of the errors that can occur, and spotlights various techniques to detect and control them. In particular, it pinpoints those programming techniques that de-sensitize the overall system and limit the propagation of temporary failures and momentary interruptions. Specific design guidelines are included.

5 DATA MANAGEMENT

Data base structures and design that apply to data processing, and the techniques and system approaches for file processing. Portfolios cover such areas as file organization, data bases, file processing, file security and control.

PORTFOLIO: Factors and Considerations in Selecting the File Organization

Despite the fact that file maintenance and reporting has been the major computer application in most business DP installations, generally little attention has been given to the effects that the file structure, selected for the data base, has on storage costs and access time. Even when the various commercially-available data management systems are used, a mis-matched file structure can significantly decrease performance.

This Portfolio evaluates the data base characteristics of file structure that affect the operating performance of file maintenance and reporting systems, and recommends specific procedures to follow for selecting a file structure that matches the data base.

INSIDE:
Basic Premises, User Participation,
Technique, Pitfalls

10-01-03

DATA MANAGEMENT

FILE PROCESSING

Factors and Considerations in Selecting the File Organization

INSIDE:
Basic Premises, User Participation,
Technique, Pitfalls

9-01-03

METHODOLOGY

DESIGN FOR RELIABILITY

Programming Techniques to Improve Reliability of the Total Information System

PAYOFF IDEA. Although system hardware operates virtually error-free today, when an error does occur, the results can be disastrous if system and applications programs were not designed to minimize the vulnerability to error.

INSIDE:
Basic Premises, Pitfalls,
Debugging Techniques

8-01-03

ENVIRONMENT

OPERATIONS

Desk-Checking Techniques that Save Debugging Time

PROI

ALL THE COVERAGE YOU NEED TO SUCCESSFULLY HANDLE ANY PROGRAMMING MANAGEMENT PROBLEM...

expertly analyzed and evaluated — with recommended solutions, worked-out examples and case histories throughout.

To give you some idea of the tremendous scope of the **AUERBACH Computer Programming Management**, here is a representative listing of current and future Portfolios — organized by specific programming management objec-

tives. Many of these Portfolios will already be filed in your volume when your service begins. Others in preparation as well as future Portfolios will be delivered when ready as part of your continuing supplementation every other month.

BENEFITS OF ACPM

ACPM provides to the programming manager (and project managers) techniques and guidelines they can use in managing their programmers and in planning for future projects. By subscribing to ACPM, the programming manager will have within arm's reach information on the latest in current practice and on the most promising of the emerging techniques and methodologies.

ACPM is not only a "how to" reference handbook, but also an aid in maintaining professional capability.

Following are some benefits that will accrue to the programming manager if he subscribes to ACPM. The benefits are illustrated by titles of articles typical of those that would be included in ACPM.

More Effective Use of Personnel

- Approaches to Increasing Programmer Productivity
- Staff Organization and Support for Program Development
- Programming Tools and Techniques to Improve Programmer Productivity

More Effective Use of Equipment

- Considerations of Computer Use in Debugging
- Desk-Checking Techniques that Save Debugging Time
- Data Compression — A Storage Saving Technique for Large Business Files
- Exploiting Virtual Storage at the Source Language Level
- An Approach to Improving the Effectiveness of DOS

More Effective Management of Programmers

- The Chief Programmer Team — An Emerging Technique for Reducing Programming Costs
- Making Project Management Work — A Manager's Guide to Controlling Computer Projects
- Modular Programming — A Technique for Standard Programming Practice
- Measuring Programmer Productivity
- Project Management with Personnel Turnover

More Effective Testing and Debugging

- Testing Techniques for Modular Programs
- "Designing" Data for Meaningful Program Testing
- An Approach to Software System Debugging

Improve Your Professional Development

- Current Practice in Computer Program Testing
- Programming Techniques for Improving System Reliability
- The Data Storage and Access Problem
- Factors and Considerations in Selecting the File Organization
- File Processing in Distributed Processing Systems
- File Integrity in a Disk-Based Multi-Accessed System
- Design Considerations in On-Line Programming
- Languages for Business Data Processing

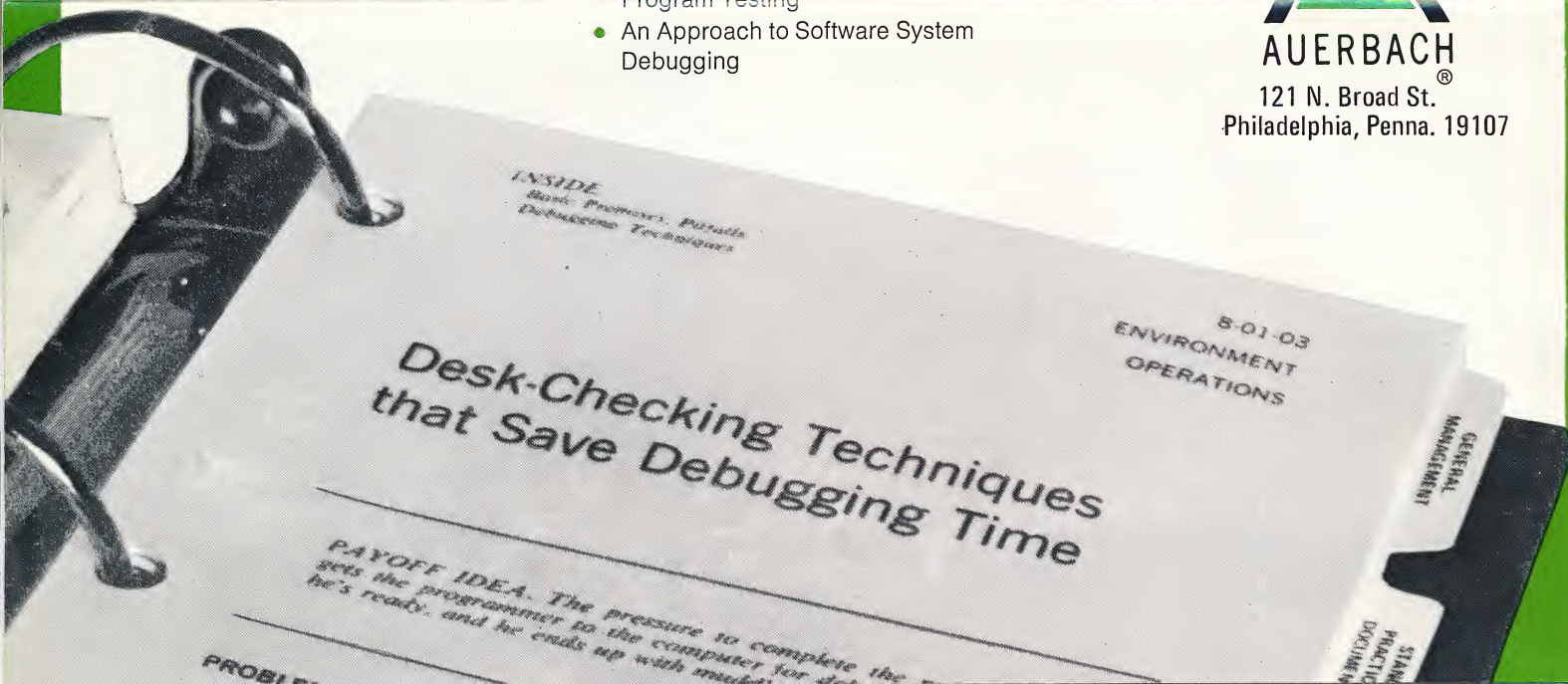
Understanding and Communicating in the Programmer's Environment

- Developing Acceptance Test Standards with the Customer
- Communications in Specifying the Programming Project
- Programmer Attitudes in an Operations-Oriented Facility



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AUERBACH COMPUTER PROGRAMMING MANAGEMENT

Subscription Order Form



Please ship on 30 days' approval **AUERBACH Computer Programming Management** containing over 40 Portfolios. If at the end of the free trial period I decide to continue the service, you will activate my subscription for one year at the special introductory rate of only \$125, and begin sending me new Portfolios every other month. If I am not completely satisfied at the end of 30 days, I will return the volume and owe nothing.

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- ✓ Individual Portfolios that zero in on specific programming management questions.
- ✓ Practical "how to" coverage on the day-to-day problems of running a programming operation.
- ✓ Advance intelligence on emerging new technical developments.
- ✓ Special time-saving charts and checklists.
- ✓ Continuous supplementation keeping coverage fresh and accurate at all times.

**A complete programming
management library in only
one, easy-to-work-with volume**



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Dear Manager:

AUERBACH's one-volume Computer Programming Management is the first advisory service to give you your own everyday working tool - a complete and remarkably efficient in-one-place guide to every facet of organizing, administering and managing a modern programming department.

In addition, its continuous coverage of new technical developments gives you a potent tool for planning the future course of your programming operation.

Perhaps you're already familiar with AUERBACH Computer Programming Management. More DP Managers and Programming Managers subscribed to it last year - in only its first year of publication - than any other computer service we have published. AUERBACH Computer Programming Management has received this widespread acceptance from managers responsible for programming because this service was created especially to solve management problems - from training programmers to implementing storage-saving techniques.

In AUERBACH Computer Programming Management, every Portfolio is a complete, self-contained analysis of a single programming problem that goes straight to the heart of your specific management questions, such as:

- . . .What are the best debugging aids to use in programming development?
What is the single most effective technique for scheduling and estimating debugging costs?
- . . .How do you choose the most qualified candidate when hiring a new programmer? What are the specific guidelines to follow?
- . . .What is the most effective way to measure programmer productivity?
What approach should you use to improve performance?
- . . .What newly developed techniques should you consider when you want to prevent unauthorized access to memory...improve DOS effectiveness. . . implement effective data bases?

In every case, the pertinent Portfolio will advise you on what to do, when to do it, and exactly how to do it. In addition, you'll be continually kept informed of the latest management techniques and programming methodology through a steady infusion of new Portfolios sent to you every other month.

As you receive these new Portfolios, all you do is file them into your volume under one or more of the five major tabbed sections into which the service has organized the entire programming management function. Within these five sections Portfolios are logically grouped together into problem-related categories, to help you quickly zero in on your answer.

And since each Portfolio can easily be withdrawn from the volume without disturbing the rest of the service, it is the most convenient way to study a pending problem out of the office, as well as for routing material to appropriate personnel, reference at meetings, and staff training.

Just consider the advantages of being able to uncover - at a moment's notice - the precise information you need whenever you face an important management decision. Here is practical help that simplifies even the most complicated programming problems.

Here, too, are a host of time-saving charts and checklists, actual examples and case histories. Many of these special features will come to you as part of your regular Portfolios. Most of them are AUERBACH Computer Programming Management exclusives.

You are probably already overscheduled, over burdened with reading, too busy to attend seminars, conferences, etc. That's why the mission of AUERBACH Computer Programming Management is to alert you to every significant opportunity, every pitfall, every consequence that can help or harm the efficiency of your day-to-day programming operation - while helping to maintain and sharpen your own professional skills.

Try the new AUERBACH Computer Programming Management FREE for 30 days!

By returning the enclosed Subscription card we will send you, on 30 days' approval, the one-volume AUERBACH Computer Programming Management, initially containing over 40 Portfolios. At the same time we will reserve a subscription in your name at an attractive introductory rate.

If, at the end of your free trial period, you decide to continue the service, we will activate your subscription at the introductory rate and send you new Portfolios every other month (see enclosed card for details).

To start your free trial, simply fill out and mail the postage-paid card. If you are not completely satisfied at the end of 30 days, just return the volume and owe nothing.

Sincerely,

AUERBACH Publishers Inc.



R. G. Scott
Manager, Customer Services

P.S. Take a few moments to scan the enclosed brochure. It illustrates many important AUERBACH Computer Programming Management features, shows you how it works, and tells you what it covers.